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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

January 29, 2016

Director of Compliance and Enforcement
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Attn: Title V Reports

Re: Semiannual Monitoring Report for Facility No. A0733

As required by Section I Part F of the subject Title V permit, the City of Sunnyvale Water Pollution Control Plant (Facility No. A0733) is submitting this Semiannual Monitoring Report for the period from July 1, 2015 through December 31, 2015. After reasonable inquiry, we conclude the following regarding this period of operation:

- There was one (1) deviation of the Input Heat Value (IHV) on S-15;
- There were no excess emissions;
- All reports were submitted on time;
- All CEM QA procedures, methodologies, and maintenance were performed as required.

The monitoring required by this permit and the monitoring results are summarized below:

PGF Heat Input Limits Monitoring [Condition 10844 (2)]:

S-14 and S-15 gas throughput for each fuel type (digester gas, landfill gas, and air-blended natural gas) is monitored continuously at five second intervals on a daily basis, well within compliance of the required 15-minute interval. Monthly samples are collected from each fuel stream and analyzed for the high-heat value, which is used with the gas throughput to calculate on a monthly basis the daily and consecutive 12-month total heat inputs to each engine.

On September 9, 2015, the calculated daily IHV for one of the power-generating engines (S-15) exceeded the 200 MMBTU limit established under permit condition 10844, Part 2. The maximum daily IHV recorded on this date was 202 MMBTU, a 1% excursion of the calculated value. The excursion did not result in excess emissions. Upon further investigation, the excursion occurred when the auto-ignite feature on the waste gas burner (A-12) failed, causing excess throughput that would otherwise be flared off to be redirected to S-15 for combustion. Normally this throughput would be combusted by both S-14 and S-15 engines, but S-14 had been taken out of service for maintenance. Consistent with the methodology required in permit Condition 10844(7)(c), the excursion was identified when analytical results from the

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monthly gas sample collection were available and the daily IHV calculations completed on September 28, 2015.

Notification in the form of an RCA was promptly sent to the Compliance and Enforcement Division of BAAQMD. Pursuant to the requirements, a 10-day and 30-day Deviation Report were submitted to BAAQMD on October 9 and 28, 2015, respectively, which provide greater detail into the nature of the excursion as well as corrective action measures taken.

The IHV values for both engines were maintained below the 200 MMBTU limit for the remainder of the reporting period. Furthermore, the WPCP remained in compliance with the 72,000 MMBTU annual total limit during the reporting period.

PGF Annual Source Test [Condition 10844 (4, 6)]:

The Annual Source Test for S-14 and S-15 was conducted on January 22, 2015. Analytical results were submitted to BAAQMD on February 13, 2015. All results were in compliance with the emission limits and regulations specified in the permit.

Landfill Gas Component System Leak Testing [8-34-301.2]:

Third and Fourth Quarter monitoring events were conducted on August 15 and November 14, 2015, to identify any presence of organic compound concentrations above the permit limit of 1,000 ppmv, measured as methane, associated with the landfill gas system components on the facility. During the fourth quarter monitoring event, component/leak emissions testing of the LFG conveyance piping was performed and detected methane gas concentration up to 2,000 ppmv within the Blower Flare Station. Corrective actions were implemented by City personnel and follow-up testing performed on November, 20, 2015, indicated the area had returned to below compliance limits within seven days following the leak detection. No other compliance issues were detected during the reporting period.

Landfill Gas Emission Control System [8-34-113.2]:

During the reporting period, the LFG emission control system was in compliance with the shutdown time limitation of ≤ 240 hours/year.

Sulfur Compounds Monitoring [Condition 19978 (2)]:

Total reduced sulfur compounds in the digester gas used to operate S-16, S-17, and S-18 are monitored quarterly. The results provided following table demonstrate compliance with the 1,550 ppmvd limit:

Total Reduced Sulfur Compounds – Draeger Tube Test results				
Sources: S-16, 17 & 18	Date of Test	Requirement	Result ppmv (dry)	Compliant (Y/N)
Third Quarter Sampling:				
Digester Gas	7/15/2015	19978 (2)	920	Y
Fourth Quarter Sampling:				
Digester Gas	10/14/2015	19978 (2)	640	Y